

## DRepl -- Optimizing Data Access for Analysis and Visualization



Animation visualizes multiple views of a large data set

DRepl consists of:

- A language to describe datasets and layouts.  
and
- Tools to create a user space fileserver.

These are used to create “Views” of the data to allow optimized access to variables of interest.

The “Views” can be used as replicas for fault tolerance, with ensured consistency between “Views”

In the simplest case can allow access to the same data as:

**Array of structures**

```
struct {  
    time float 64  
    heat, pressure float 32  
} data []
```

**Separate Arrays**

```
var time[] float 64  
var time[] float 32  
var pressure[] float 32
```

This allows sequential array writes from the application and (time, heat, pressure) retrieval for visualization.